

Claims

1. A pressurised container for holding substances under
5 pressure, in particular frozen substances (14), having an
outlet valve (12), which is adjustable between a closed
position and an opened position for dispensing the
substance (14), and which has a sealing element (24),
disposed in a seat (22), for sealing in the closed state
10 of the outlet valve (12), **characterised in that** heating
and in particular a change in the aggregate state of the
substance and an attendant or otherwise-occurring
reduction in the viscosity of the substance bring about
an increase in the flow velocity in the region of the
15 sealing element (24) when the outlet valve (12) is open,
along with an increased pressure drop at the sealing
element (24), as a result of which a force that is
substantially increased compared to the normal state is
20 exerted on the sealing element (24) in the direction for
extracting it from its seat (22), and/or the reduced
viscosity, with the aid of at least one connection (74;
174), provided between the seat (22) and the container
interior, and having a small cross- sectional area brings
25 about an increased pressure in the seat (22) and thereby
an increased force on the sealing element (24) in a
direction out of its seat (22), and the resultant force
on the sealing element (24), if a certain minimum
viscosity of the substance (14) fails to be attained,
30 leads to extracting the sealing element (24) from its
seat, and the detached sealing element (24) closes or
substantially reduces an opening cross section.

- 24 -

2. The pressurised container of claim 1, **characterised in that** the sealing element (24; 124) is embodied annularly, and the seat (22; 122) is in the form of an annular groove.

5

3. The pressurised container of claim 2, **characterised in that** a plurality of connecting bores (74; 174) are provided, distributed over the circumference between the seat (22; 122) and the interior of the container.

10

4. The pressurised container of claim 2 or 3, **characterised in that** on the bottom of the seat (122), an annular conduit (123) is provided, which is narrower than the actual seat (122).

15

5. The pressurised container of one of the foregoing claims, **characterised in that** the sealing element (24; 124) protrudes from its seat (22; 122) and protrudes obliquely, in terms of the flow direction, into the opened flow cross section, and its contour defines the narrowest point of the flow cross section.

20

6. The pressurised container of one of the foregoing claims, **characterised in that** the sealing element (22; 122), in the closed state, rests sealingly on a conical contact face (38; 138).

25

7. The pressurised container of claim 5 or 6, **characterised in that** the narrowest point of the flow cross section is contoured in nozzle-like fashion, preferably similarly to a venturi nozzle.

30

- 25 -

8. The pressurised container of one of claims 2-7,
characterised in that the annular sealing element (24; 124) has a substantially rectangular cross section, preferably with rounded or chamfered edges (36; 136), and an edge (36; 136) protruding from the seat (22; 122) defines the contour of the narrowest point.
9. The pressurised container of one of the foregoing claims,
characterised in that the outlet valve is embodied as a multiple-stage valve and in a dispensing operation has at least two opening cross sections that open one after the other, each with an associated sealing element, and at least the sealing element of the cross section that opens first is embodied so as to be detachable from its respective seat if a minimum viscosity fails to be attained.
10. The pressurised container of one of the foregoing claims,
characterised in that the sealing element (24) detached from its seat (22) can be re-inserted into its seat (22) by closure of the outlet valve (12).
11. The pressurised container of claim 10, **characterised in that** the sealing element (24) comprises an annular disk with a rigid substrate and a sealing part mounted on the substrate, or comprises a rigid sealing material, and the substrate is guided in the extraction direction between the seat (22) and its position that closes the opening cross section.

- 26 -

12. The pressurised container of claim 11, **characterised in that** the sealing element (24) is guided axially on a central protrusion (64).

5 13. The pressurised container of claim 11, in particular of one of the foregoing claims, **characterised in that** a valve element (20) is movable in the direction of the interior of the can by a tappet element (26) for opening the opening cross section, and the tappet element (26) 10 can be pressed down by a lever (30), whose lever arm comprises at least two parts (40, 42) that are fixed pivotably to one another and can be swivelled between a collapsed position of repose in which they are preferably locked together and an open, preferably likewise locked 15 operating position for lengthening the lever arm.

14. The pressurised container of claim 13, **characterised in that** the axial guidance for the sealing element (24) forms the connection (64) between the valve element (20) 20 and the tappet element (26).

15. The pressurised container of claim 14, **characterised in that** the tappet element (26) is embodied in sleevelike fashion and is connected to the connecting element (64) 25 via obliquely or radially extending struts (62).

16. The pressurised container of one of claims 13-15, **characterised in that** a first lever arm part (40) is pivotably connected laterally of the tappet element (26) 30 to a part (48) connected solidly to the container (10) and acts on a radial protrusion (58, 60) via pressure elements (54).

17. The pressurised container of claim 16, **characterised in that** the radial protrusion (58) is formed onto a nozzle top unit (28) that is seated on the tappet element (26, 5 60).
18. The pressurised container of claim 17, **characterised in that** the nozzle top unit (28) is retained between the tappet element (26) and two opposed pressure elements 10 (54) of the first lever arm part (40).
19. The pressurised container of one of claims 16-18, **characterised in that** the two lever arm parts (40, 42) are embodied in hooplike fashion, and the first lever arm 15 part (40) surrounds the nozzle top unit (28) and/or the tappet element (26) in both positions, and the second lever arm part (42) surrounds the nozzle top unit (28) and/or the tappet element (26) in the position of repose.
20. The pressurized container of one of the foregoing claims, **characterised in that** after the detachment of the sealing element (24; 124) from the sealing seat (22; 122), a controlled evacuation of the container contents is effected through an evacuation opening. 25
21. The pressurised container of one of the foregoing claims, **characterised in that** the outlet valve (12) has, in addition to a first opening cross section, at least one further opening cross section, which can be uncovered in 30 order to facilitate filling of the container.

- 28 -

22. The pressurised container of claim 21, **characterised in that** the two opening cross sections can be uncovered in succession, in the manner of a multiple-step valve.

5 23. The pressurised container of claim 22, **characterised in that** the outlet valve is designed such that in the filled operating state, only the first opening cross section can be uncovered.

10 24. The pressurised container of one of claims 21-23, **characterised in that** a disk element (180) is provided between the valve housing (16) and the valve element (20), and the first sealing point (184) with the first opening cross section is provided between the disk element (180) and the valve element (20), and the second sealing point (186) having the second opening cross section is provided between the disk element (180) and the valve housing (16).

15 25. The pressurised container of claim 24, **characterised in that** the disk element (180) is guided axially movably along a guide (182) on the valve housing (16).

25

30